

REMARKS

Re-examination and favorable reconsideration in light of the above amendments and the following comments are respectfully requested.

Claims 29 - 34 are pending in the application. Currently, claims 29 - 31 and 33 stand rejected; and claims 32 and 34 stand objected to.

By the present amendment, Applicant has amended claims 29 and 30.

In the office action mailed January 19, 2011, the Examiner rejected claims 29 - 34 under 35 U.S.C. 112, second paragraph as being indefinite. Amendments have been made to claim 29 and 30 to overcome this rejection. The Examiner is kindly requested to withdraw the rejection.

Further in said action, claims 29 - 31 and 33 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,613,653 to Irvin, Jr. This rejection is traversed by the instant response.

Claim 29 is directed to a method comprising the steps of: providing a core formed of a material exhibiting ferri-magnetic properties and having a semi-annular cross-section, the core defining a channel adapted to receive a high tension lead of an engine or machine, locating at least part of the high tension lead in the channel, retaining the core and the high tension lead in a position with respect to each other, and applying electricity to the high tension lead to generate an electromagnetic field in the core which radiates from the core to act on a fuel in the engine or machine and to generate a spark for burning the fuel in the engine or machine.

Irvin, Jr. discloses four identical couplers 11 which attach to the head of a distributor 14 (see Fig. 1). "Each of the couplers 11 has an integral tubular body mandrel 30 including a slightly tapered enlarged head portion 31, a reduced tubular central portion 32, and a still further reduced tubular lower end portion 33" (col. 2, lines 69 - 73). The central portion 32 is of a dielectric material and has an electrically conductive tube 43 extending through its center (see Fig. 2).

The lower end of the conductive tube 43 engages the connector on a spark plug in the distributor 14. The upper end of the conductive tube 43 is electrically connected to a spark plug lead socket 44. "The socket 44 is sized to receive a standard male spark plug lead connector 23 so that the spark plug leads may be readily coupled into the upper end of the coupler merely by inserting them by hand into the socket 44" (col. 3, lines 21 - 26).

A "partial sleeve conductor 80" is "tightly fitted on the central coupler body portion 32 and circumferentially encompassing a major portion of the body" (col. 3, lines 64 - 67). The sleeve 80 is electrically connected to a conductor 12, as shown in Fig. 4. The conductor 12 electrically connects the sleeve 80 to corresponding sleeves provided in each of the other three connectors 11 (see Fig. 1).

In use, "as the current flows through the tube 43 of the coupler 11 to energize the spark plug lead, an electrical field is effected in the vicinity of the tube 43 inducing a potential on the conductive sleeve 80 surrounding and electrically insulated from the tube 43" (col. 5, lines 61 - 65). "The potential induced in the sleeve 80 is conducted to the insulation bare conductor portion 12b and through such conductor to the serially connected other couplers in the system. The

sleeves 80 in the couplers 11 connected with the non-energized distributor sockets 13 are thus raised to the potential of the sleeve 80 surrounding the energized coupler" (col. 5, line 72 to col. 6, line 3).

The sleeve 80 disclosed in Irvin Jr. does not have a semi-annular cross-section. Figure 4 shows the sleeve 80 in cross-section and it is clear that the sleeve 80 is almost completely annular with a small section cut out to enable the sleeve 80 to be clipped onto the body portion 32. Indeed, col. 3, lines 66 - 67 describes the sleeve 80 as "circumferentially encompassing a major portion of the body." This teaches away from the present invention which requires a core having a semi-annular cross-section which, by virtue of its shape, does not circumferentially encompass a major portion of anything. A person skilled in the art would have no incentive to modify the sleeve 80 of Irvin, Jr. to have a semi-annular cross-section. The modification would not have been obvious to a person skilled in the art.

Furthermore, the sleeve 80 in Irvin, Jr. connects to a coupler 11 and not to any of the high tension leads 22. The essence of Irvin, Jr. is to provide couplers 11 which attach to a distributor 14, with the couplers 11 being electrically connected by a conductor 12 to form the ignition device 10 shown in Fig. 1. It would not be obvious to a person skilled in the art to instead fit the sleeve 80 around one of the high tension leads 22. This modification would go against the teaching of Irvin Jr. which is to provide a device to be connected between spark plugs and high tension leads.

It would not be obvious to a person skilled in the art to go against the teaching of Irvin Jr. to implement a method which comprises the steps of providing a core formed of a material

exhibiting ferri-magnetic properties and having a semi-annular cross-section, the core defining a channel adapted to receive a high tension lead of the engine or machine, and locating at least part of the high tension lead in the channel.

The Examiner is impermissibly using hindsight to reject claim 29 and dependent claims 30, 31, and 33 in view of Irvin, Jr. The sleeve 80 in Irvin Jr. is clearly different to the semi-annular core of the present invention. Moreover, the sleeve 80 provides an electrical connection to other sleeves in other couplers, whereas the core of the present invention generates an electromagnetic field which radiates from the core to act on fuel in an engine.

The invention of claim 29 is novel and non-obvious. Claims 30, 31, and 33 are allowable for the same reasons as claim 29 as well as on their own accord.

The Examiner is thanked for the indication that claims 32 and 34 contain allowable subject matter.

For these reasons, the instant application is believed to be in condition for allowance. Such allowance is respectfully solicited.

Should the Examiner believe an additional amendment is needed to place the case in condition for allowance, the Examiner is hereby invited to contact Applicant's attorney at the telephone number listed below.

No fee is believed to be due as a result of this response. Should the Director determine that a fee is due, he is hereby

authorized to charge said fee to said Deposit Account No. 02-0184.

Respectfully submitted,
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